

Our Reference: GBN-110-C

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Jennipher Grudzien, et al  
Serial Number: 10/784092  
Filing Date: February 20, 2004  
Examiner/Art Group Unit: Levkovich, Natalia A./1797  
Title: REACTION SURFACE ARRAY DIAGNOSTIC APPARATUS

**APPEAL BRIEF**

**MS Appeal Brief-Patents**

Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Please enter the following Appeal Brief in the appeal filed concurrently herewith on July 2, 2009.

Respectfully submitted,

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**REAL PARTY IN INTEREST**

The real party in interest of the present appeal is Grace Bio-Labs, Inc., the assignee as evidenced by the assignment set forth at Reel 015019 and Frame 0997.

**RELATED APPEALS AND INTERFERENCES**

There are no appeals, interferences, or judicial proceedings, which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

**STATUS OF CLAIMS**

Claims 1 and 3-10 stand finally rejected by Examiner, as noted in the Advisory Action dated May 27, 2009. Claim 2 is cancelled. The rejection of claims 1 and 3-10 is appealed.

**STATUS OF AMENDMENTS**

Applicants' amendment of May 7, 2009, submitted subsequent to the Examiner's final rejection, was indicated by the Examiner in the Advisory Action dated May 27, 2009 as being entered by the Examiner upon filing of this appeal.

### **SUMMARY OF CLAIMED SUBJECT MATTER**

Independent claim 1 a reaction surface array diagnostic apparatus 100, Figures 3-4c and 12-16.

The apparatus 100 includes a substrate 102(Figure 3, page 9 paragraph 67-69, lines 5-15) with a plurality of reaction surfaces 104 predeposited in microtiter well spaced bound arrays on the substrate 102. (Fig. 3, page 9, paragraph 70, lines 16-19).

A plate 112 has a plurality of wells 116 extended therethrough in microtiter well spacing. (Fig. 3, page 9 paragraph 71, line 20-28).

A gasket 120 (pages 9 and 10, paragraph 72, page 9, lines 29-31 and page 10, 1-9, Fig. 3). Fluidically seals the plate 112 to the substrate 102. The gasket 120 has microtiter spaced wells 124 combining with the wells 116 and plate 112 to form reaction chambers 110 (Fig. 4D, page 9, paragraph 71, lines 20-23.about the reaction surfaces 104 on the substrate 102.

A pair of C-shaped clamps 200 engages opposed edges of the plate 112 and substrate 102 (Page 13, paragraph 91, lines 27-30 and page 14, lines 1 and 2, Figs. 12-14). The clamps 200 compress the gasket 120 between the plate 112 and substrate 102.

**GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

The issues presented for consideration in this appeal are as follows:

1. Whether claims 1 and 3-10 fail to comply with the written description requirement of 35 USC §112, first paragraph.
2. Whether claims 1 and 3-10 are unclear for failing to particularly point out and distinctly claim the subject matter which Applicants' regard as the invention as required by 35 USC § 112, second paragraph.

**ARGUMENT**

- A. **APPLICANTS' INVENTION AS SET FORTH IN CLAIMS 1 AND 3-10 COMPLIES WITH THE WRITTEN DESCRIPTION REQUIREMENT OF 35USC§112, FIRST PARAGRAPH. THE CLAIMS CONTAIN SUBJECT MATTER WHICH IS DESCRIBED IN THE SPECIFICATION IN SUCH A WAY AS TO REASONABLY CONVEY TO ONE SKILLED IN THE RELEVANT ART THAT THE INVENTOR'S, AT THE TIME THE APPLICATION WAS FILED, HAD POSSESSION OF THE CLAIMED INVENTION.**

In the final Office Action dated, February 3, 2009, the Examiner rejects claims 1 and 3-10 under 35 USC §112, first paragraph. It is respectfully submitted that Applicants' invention as defined in claim 1, set forth in the claim appendix of the Appeal Brief, and which is identical to claim 1 submitted in the After Final Amendment dated May 7, 2009 which the Examiner indicated would be entered upon filing of this Appeal. Claim 1 clearly defines Applicant's invention as having a substrate, a plate and a gasket. Accordingly, it is respectfully submitted that Applicants' invention as defined in claim 1 meets the requirements of 35 USC§ 112, first paragraph, for a clear written description of the invention.

Amended claim 1 also renders any drawing objection raised by the Examiner moot for the same reasons.

For the at least the reasons stated above, Applicants' respectfully request that the Board reverse this rejection

- B. **APPLICANTS' INVENTION AS SET FORTH IN CLAIMS 1 AND 3-10 CLEARLY AND PARTICULARLY POINTS OUT AND DISTINCTLY CLAIMS A SUBJECT MATTER IN WHICH THE APPLICANTS' REGARD AS THE INVENTION AS REQUIRED BY 35 USC § 112, SECOND PARAGRAPH.**

In the Office Action dated February 3, 2009, the Examiner rejects claims 1 and 3-10 as being unclear for failing to particularly point out and distinctly claim the subject matter which the Applicants' regard as the invention.

With respect to claim 1, the Examiner queries: “the opposed edges of the plate engaged by the clamps is unclear. Does this mean that the clamps may be arranged across the same plate?”

Claim 1 defines the pair of C-shaped clamps as engaging opposed edges of the plate and the substrate. Thus, the C-shape clamps clearly engage the same plate; but on opposed edges of the plate.

The Examiner also queries: “It is also unclear whether the clamps must directly contact the plate.”

Claim 1 clearly defines the pair of C-shaped clamps as engaging the edges of the plate and the substrate. Webster’s New Twentieth Century Dictionary, unabridged second edition, defines “engage” as “to mesh together”. It is respectfully submitted that defining the contact between the clamps and the plate and substrate is clearly defined by the use of the term “engaging”. Thus, it is submitted that claim 1 particularly points out and distinctly claims this feature of the Applicants’ invention.

The Examiner also queries: “Additionally, the reaction surfaces pre-deposited in “bound arrays,” is unclear.”

Claim 1 includes the clarifying language “on the substrate” when describing the substrate having a plurality of reaction surfaces pre-deposited in microtiter well-bound arrays. It is submitted that this feature is particularly pointed out in claim 1. The Examiner, in an earlier interview in this application, suggested the language “reaction surfaces pre-deposited in bound arrays” and has not objected to this language which has been part of a claim prior to the last Amendment.

The Examiner states “Also, as a result of the amendment “the plate” of lines 7 plus lacks antecedency. See also claims 5 and 10.”

It is respectfully submitted that “the plate” has proper antecedent basis in claims 1, 5 and 10.

In claim 3, the Examiner states that “recess” lacks antecedent basis. Claim 3 now uses the term “aperture” as previously defined in claim 3.

With respect to claim 4, the Examiner states: “It is unclear how clamps of line 2 are related to the “pair of C-shaped clamps” of claim 1.” Claim 3, as last amended, provides antecedent basis for each clamp of the pair of C-shaped clamps.

Further with respect to claim 4, the Examiner states “It is further unclear whether or not the structure recited in lines 3-4 pertains to each clamp, or to the plurality of clamps in line 2.” As noted above, claim 4 was revised to make it clear that the features of each clamp defined in claim 4 pertain to each of the clamps of the pair of C-shaped clamps.

With respect to claim 6, the Examiner states “each pair of clamps lacks antecedent basis.” Claim 6 now defines; “each pair of clamps” has been redefined as “the pair of C-shaped clamps” for proper antecedent basis.

Further with respect to claim 6, the Examiner states “Also, each pair of clamps defined by the wells in each stack is not clear.” A comma was introduced into line 3 of claim 6 to separate “each stack individually joined together by the pair of C-shaped clamps” from “the wells in each stack maintaining a microtiter plate well spacing across the array.”

As such, it is respectfully submitted that claim 6 particularly points and distinctly claims Applicants’ invention.

For the reasons stated above, Applicants’ respectfully requests the Board reverse this rejection.

Applicants’ also notes that claim 4 contains a typographical error not previously noted by Applicants’ attorney and the Examiner. In claim 4, line 2, the term “claims” should read “clamps”.

### **CONCLUSION**

In conclusion, Applicants respectfully submit that the rejection of claims 1 and 3-10 is in error for at least for the foregoing reasons, and therefore, should be reversed.

Respectfully submitted,

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## **CLAIMS APPENDIX**

1. A reaction surface array diagnostic apparatus comprising:
  - a substrate with a plurality of reaction surfaces predeposited in microtiter well spaced bound arrays on the substrate;
  - a plate having a plurality of wells extending therethrough in microtiter well spacing;
  - a gasket fluidically sealing the plate to the substrate, the gasket having microtiter well spaced wells combining with the wells in the plate to form reaction chambers about the reaction surfaces on the substrate; and
  - a pair of C-shaped clamps engaging opposed edges of the plate and the substrate, the clamps compressing the gasket between the plate and the substrate.
2. Claim 2 is cancelled.
3. The apparatus of claim 1 further comprising:
  - at least one open ended aperture formed in the plate; and
  - a projection extending from at least one of the clamps and releasably engagable with the at least one aperture to releasably fix the clamp to the plate.
4. The apparatus of claim 1 wherein each clamp of the pair of claims comprises:
  - two spaced legs extending in the same direction from opposite ends of a central wall.
5. The apparatus of claim 4 wherein:
  - the legs and the central wall define a channel for receiving a stack arrangement of the substrate, the gasket and the plate.

6. The apparatus of claim 4 further comprising:

an array a plurality of side-by-side arranged stacks, each stack individually joined together by the pair of C-shaped clamps ,the wells in each stack maintaining a microtiter plate well spacing across the array.

7. The apparatus of claim 6 further comprising:

a tray having an opening for receiving and supporting the array.

8. The apparatus of claim 7 further comprising:

a sloped surface formed along one edge of the tray for guiding the array into the tray.

9. The apparatus of claim 6 wherein:

two adjacent clamp members of two side-by-side disposed stacks have abutting central walls.

10. The apparatus of claim 1 further comprising:

a non-releasable adhesive fixedly joining the gasket to the plate.

**EVIDENCE APPENDIX**

None.

**RELATED PROCEEDINGS APPENDIX**

None.